



Application No. 10/609,374  
Amendment dated March 26, 2007  
Reply to Office Action of October 26, 2006

Docket No.: 1906-0117P

### AMENDMENTS TO THE CLAIMS

Please amend the claims as follows:

Claims 1.-16. (Canceled)

17. (New) A method of analysing an image comprising performing a Hough transform on points in an image space to an n-dimensional Hough space, selecting points in the Hough space representing features in the image space, characterised by projecting and accumulating the selected points onto the axis or axes for m of the n variables, corresponding to the n-dimensions of the Hough space, where m is less than n, and analysing the m variables and the corresponding accumulated values to derive information about the features in the image space.

18. (New) The method of claim 17 comprising detecting points for the Hough transform using feature detecting means comprising any of edge or corner detecting means or colour feature detecting means.

19. (New) The method of claim 17 comprising identifying peaks in the accumulated values, and using the corresponding values for the in variables.

20. (New) The method of claim 19 comprising analysing the relationships between the values for the m variables corresponding to the peaks in the accumulated values.

21. (New) The method as in any preceding claim, in which  $n=2$  and  $m=1$ .

22. (New) The method of claim 21 wherein the Hough transform is for detecting lines and maps a point (x, y) in image space to points (r,  $\theta$ ) in Hough space.

23. (New) The method of claim 22 wherein the analysis involves analysing the values of  $\theta$ .

24. (New) The method of claim 17 wherein the step of selecting points in the Hough space involves identifying local peaks and comparing the local peaks with a threshold.

25. (New) The method of claim 24 wherein the threshold is derived by generating a plurality of random reference images, for each reference image performing a Hough transform and deriving a histogram of accumulated values in Hough space, combining the histograms for the reference images, and using the combined histograms to derive a threshold.

26. (New) The method of claim 25 wherein the reference images have similar statistical properties to the subject image.

27. (New) The method of claim 17 wherein, the analysis of the selected points is for identifying man-made structures and/or for distinguishing between urban/non-urban areas.

28. (New) An apparatus for image analysis comprising: means for processing image signals, means for performing a Hough transform, means for selecting points in the Hough space representing features in the image space, means for projecting and accumulating the selected points onto the axis or axes for  $m$  of the  $n$  variables, corresponding to the  $n$ -dimensions of the Hough space, where  $m$  is less than  $n$ , and means for analysing the  $m$  variables and the corresponding accumulated values to derive information about the features in the image space.

29. (New) A computer readable medium having stored thereon computer executable program for analysing an image, the computer program when executed causes a computer system to execute steps of: performing a Hough transform on points in an image space to an  $n$ -dimensional Hough space, selecting points in the Hough space representing features in the image space, characterised by projecting and accumulating the selected points onto the axis or axes for  $m$  of the  $n$  variables, corresponding to the  $n$ -dimensions of the

Hough space, where  $m$  is less than  $n$ , and analysing the  $m$  variables and the corresponding accumulated values to derive information about the features in the image space.

30. (New) A method of generating a threshold for identifying features in a subject image using the Hough transform, the method comprising generating a plurality of reference images, for each reference image performing a Hough transform and deriving a histogram of accumulated values in Hough space, combining the histograms for the reference images, and using the combined histograms to derive a threshold.

31. (New) The method of claim 30 wherein the reference images have similar statistical properties to the subject image.

32. (New) The method of claim 30 wherein the reference images are randomly generated.

33. (New) The method of claim 31 wherein said combining of histograms comprises averaging.

34. (New) The method of claim 31 wherein said threshold is for identifying peaks in a histogram derived from a Hough transform of an image.

35. (New) An apparatus for generating a threshold for identifying features in a subject image using the Hough transform comprising: means for generating a plurality of reference images, means, for each reference image, for performing a Hough transform and deriving a histogram of accumulated values in Hough space, means for combining the histograms for the reference images, and means for using the combined histograms to derive a threshold.

36. (New) A computer readable medium having stored thereon computer executable program of generating a threshold for identifying features in a subject image using the Hough transform, the computer program when executed causes a computer system to execute steps of: generating a plurality of reference images, performing, for each reference image, a Hough transform and deriving a histogram of accumulated values in Hough space,

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combining the histograms for the reference images, and using the combined histograms to derive a threshold.